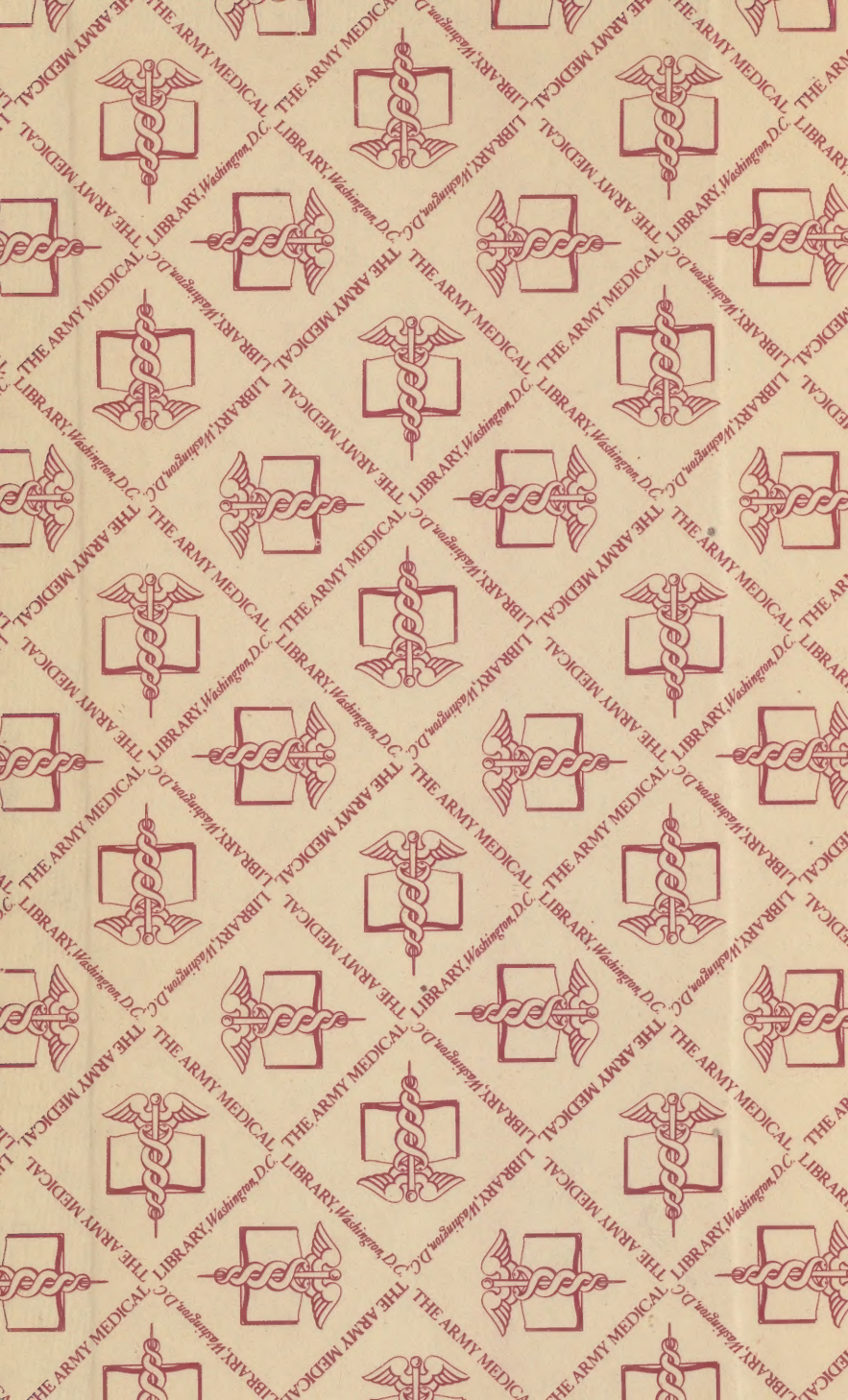
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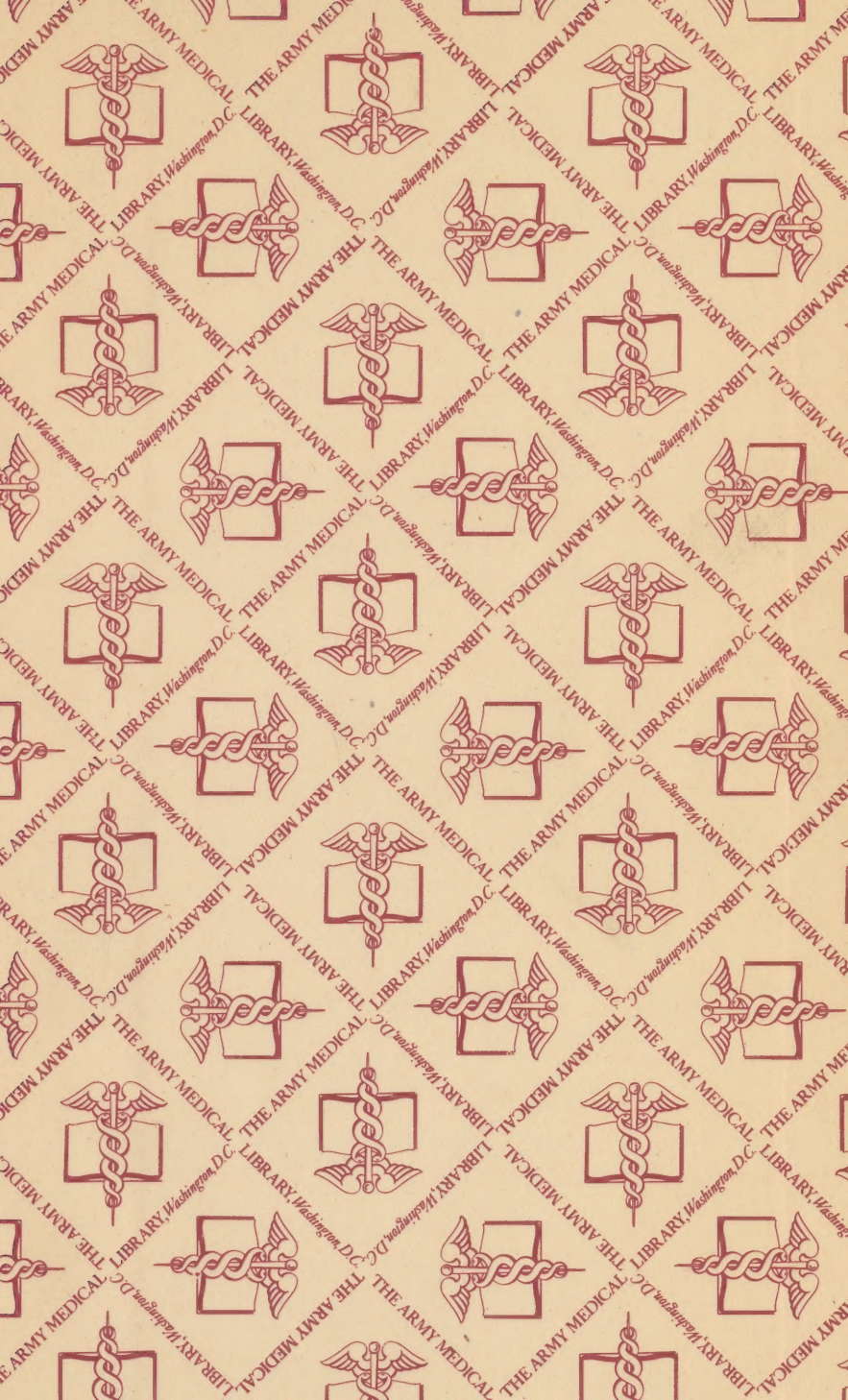
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THE INFLUENCE OF CIVIC LIFE, SEDENTARY HABITS, AND INTELLECTUAL REFINEMENT, ON *HUMAN HEALTH, AND HUMAN HAPPINESS;* INCLUDING AN ESTIMATE OF THE BALANCE OF ENJOYMENT AND SUFFERING IN THE DIFFERENT GRADATIONS OF SOCIETY.

LIBRARY

BY JAMES JOHNSON, ESQ.

Surgeon to His Royal Highness the Duke of Clarence; Author of the "Influence of Tropical Climates on European Constitutions,"—of a "Practical Treatise on Derangements of the Liver, Digestive Organs, and Nervous System,"—and Editor of the "Medico-Chirurgical Journal; or Quarterly Register of Medical and Surgical Science."

Et mores Hominum multorum vidit et urbes. Virg.

——————He studied from the Life,
And in the Original perus'd Mankind. Armstrong.

FIRST AMERICAN FROM THE LONDON COPY.

PHILADELPHIA:

PRINTED FOR THOMAS HOPE.

PUBLISHED BY MATHEW CAREY AND SON, THOMAS DOBSON, AND MOSES THOMAS.

1820.

T. TOWN, PRINTER.

ANNEX,
Hygiene, Pub.

PREFACE.

THE practical inferences contained in the following Essay form a part of the result of twenty-one years' extensive observation of Man, in all stages of civilization and refinement, from the Savage of Nicobar to the Philosopher of Europe. During the above period, as Human Health was the Author's primary object of study, so the Influences of *Climate* and *modes of life* on that health, were important subjects of investigation.—The first part of this interesting inquiry [Influence of Climate] has already passed the ordeal of public opinion and reception, in a manner that can leave but little doubt in the Author's mind respecting the fate of the present Work.

As he took the pains to observe, so has he claimed the privilege to think for himself; and if he has made no allusion to any man's writings on the subject of this Essay, it is simply because he is not indebted to any man's ideas or experience in its construction.

The mass of observations, on which his positions are founded, were collected in active scenes of life, during personal visitations in many of the largest cities and societies of the world; and a considerable proportion of the morbid influences here delineated have been severely felt, *in person*, by the Author. They are not, therefore, the creatures of imagination, or the theories of the closet. They are promulgated under the sole patronage of Nature and truth. The Author's immortal namesake (Dr. Johnson) has indeed remarked, that—" truth is *feeble* when it stands alone." The writer of this Essay has not hitherto found it so. Truth is *immutable*, and consequently cannot be *feeble*. Like a solid tower or pyramid, it may be immersed and concealed, for

a time, in the mist of ignorance or prejudice; but the light of reason ultimately dispels the cloud, and the structure bursts upon our view, unsullied and unshaken.

In this, as in the Author's other two Essays, on "Tropical Climates," and "Derangements of the Liver, Digestive Organs, and Nervous System," he has endeavoured to render his ideas and his language intelligible to all, without, in any one instance, descending from the dignity of a philosophical discussion.

Every individual, who has had the misfortune to exchange a state of health for that of sickness, will be able to appreciate the utility of a work in which the *preventive checks* to disease are clearly unfolded, and legitimately deduced from actual and extensive observation. And as the Author is not aware that any work has been expressly written on the important subject of the following Essay, he confidently trusts that he shall hereby render some service to the community at large, but

more particularly to his fellow citizens in this boundless and luxurious metropolis. That a candid examination of the principles, and a moderate adoption of the precepts here inculcated, would contribute greatly to the mitigation of human sufferings, and the preservation of human health, is the firm belief, and the ardent hope of

THE AUTHOR.

No. 1, Albany Court Yard, Piccadilly,
October the 1st, 1818.

TABLE OF CONTENTS.

Introductory Observations on the impulse to Civic Association - - - - - - - - - - - - 8

CHAP. I.

Influence of Civic Life, sedentary Habits, and intellectual Refinement, on the Organic System and its Functions - - - - - - - - - - 16

Section I. *On the Digestive Organs.*

Subsection 1. Through the Medium of Food - - 16

Balance of Enjoyment in Food - - - 28

——— 2. Influence of Civic Life, &c. on the Digestive Organs, through the Medium of Drink - - - - - 31

Parallel of Enjoyment and Suffering in Drink - - - - - - - - 39

——— 3. Influence of Civic Life, &c. on the Digestive Organs, through the Medium of Air - - - - - - 40

Balance of Enjoyment in respect to Air 43

——— 4. Influence of Civic Life, &c. on the Digestive Organs, through the Medium of sedentary Habits - - 44

——— 5. Influence of Civic Life, &c. on the Digestive Organs, through the Medium of Mental Emotions - - - 46

——— 6. Influence of Civic Life, &c. on the Digestive Organs, through the Medium of late Hours - - - - 50

——— 7. Influence of Civic Life, &c. on the Digestive Organs, through the Medium of Medicine - - - - - 51

Balance of Enjoyment and Suffering in Medicine - - - - - - 57

SECTION II.

Influence of Civic Life, sedentary Habits, and intellectual Refinement, on the Heart and Circulating Vessels - 59

SUBSECTION 1. Influence of Civic Life, &c. on the Heart, through the Medium of the Digestive Organs - - - - - 61

——— 2. Influence of Civic Life, &c. on the Heart, through the Medium of the Skin - - - - - - - 68

——— 3. Influence of Civic Life, &c. on the Heart, through the Medium of the Passions - - - - - - 71

SECTION III.

Influence of Civic Life, sedentary Habits, and intellectual Refinement, on the Lungs and Glandular System - 75

CHAP. II.

Influence of Civic Life, sedentary Habits, and intellectual Refinement, on the Animal or Muscular System - 78

CHAP. III.

Influence of Civic Life, sedentary Habits, and intellectual Refinement, on the Brain and Nervous System - 83

SECTION I.

Influence of Civic Life, &c. on the Brain and Nervous System, through the Medium of the Digestive Organs 89

SUBSECTION 1. Influence of Civic Life, &c. on the Brain and Nervous System, through the Medium of the *Liver* in particular - - - - - - - - 93

——— 2. Influence of Civic Life, &c. on the Brain and Nervous System, through the Medium of the Heart - - - - 96

SECTION II.

Influence of Civic Life, &c. on the Brain and Nervous System, through the Medium of the Passions - - 98

Prevention or Cure - - - - - - - - - 106

Balance of Enjoyment and Suffering in respect to the Intellectual System - - - - - - - - 109

THE

INFLUENCE

OF

CIVIC LIFE, SEDENTARY HABITS,

AND

INTELLECTUAL REFINEMENT,

ON

HUMAN HEALTH AND HUMAN HAPPINESS.

In all ages Man has evinced a *gregarious* impulse. As most animals do the same, and as the lower and weaker orders of these *seem* to associate for the sake of mutual defence, a similar object has been considered the reason of our species uniting and congregating in cities and societies. It would not appear, however, that *fear* is the principal operating cause of this impulse, either in man or animals. In the bosom of civilized society, and in the security of peace, we see this powerful inclination to associate, unfolded in every stage of

life, from the cradle to the grave. It must, therefore, be a dictate of Nature and Reason, for a contrary disposition is one of the characteristics of an insane mind.

Since Man is led to this, as well as to all other objects, by his passions, it is necessary to trace and distinguish *these*, in order to ascertain the physical effects of civilization and refinement on the corporeal fabric, in congregated masses of society. This is an essential part of the investigation; for we shall find, that the same springs of action which first draw men together, operate afterwards with increased power, as the magnet attracts stronger in proportion as it comes nearer its object, or as the velocity of a falling body is accelerated as it descends.

What, then, is the prime mover towards civic association? The INTERCHANGE OF IDEAS, or THE DESIRE OF INTELLECTUAL INTERCOURSE. This is not only the strongest, but the earliest, the latest, and the steadiest impulse or propensity implanted in the mind of Man—and of Woman too. Love, ambition, avarice, has each its æra; but the colloquial cacoethes begins with the infant's prattle,

and only ceases when speech and hearing are obliterated by extreme age or infirmity. To be convinced of this truth, we have but to look around us in the book of Nature.—We shall there see it exemplified in every station of life, from the court to the cottage—from the crowd of the Exchange to the study of the Philosopher, who converses with the dead and the living through the medium of books. Every where Man seeks opportunities for collecting or transmitting ideas. The human mind is a vast emporium, wherein the rude materials, conveyed by the external senses, are manufactured, and, as in the kaleidoscope, perpetually revolved into new forms and configurations.

In nova fert animus mutatas dicere formas,
Corpora.———

The exchange of these manufactures seems to be the universal commerce of mankind—with this peculiarity, that we are generally more desirous to bestow than to receive.

This parent impulse having drawn men together, a host of new passions were, in consequence, developed, if not generated. Emulation, ambition, envy, hatred, jealousy, &c. were the inevitable re-

sults of the laws, regulations, and clashing interests, which arose out of this state of things; and which in proportion as civilization and refinement advance, levy such severe contributions on our health and happiness. This last investigation is the great object of the present work, and is one of high import and interest to every class of society.

In Man we can clearly distinguish three leading systems or series of parts, with their appropriate functions. The first is the *organic* system, comprehending the heart and vessels which circulate the blood and other fluids—the lungs the digestive organs and the glands. These are not under the governance of the will, and perform their allotted functions, whether we sleep or wake. The second class comprehends all the *voluntary* muscles, by means of which we transport ourselves from place to place—construct our edifices and manufactures—lay waste empires in war, or cultivate the fields in peace! This is termed the *animal* system. Last of all comes the *sentient and intellectual system*, viz. the brain and nerves. The innumerable ramifications of the nerves, spread over the surface of the body, and crowded into the tissues composing

the different organs of sense, convey to the brain, like faithful videttes, intelligence of every thing that passes in the world around us. From these impressions, the mind forms its ideas, its judgments, and its determinations. In the development of this system Man excels all other animals, as much as the sun excels, in size and splendour, the meanest planet.

Now these three systems, although *apparently* independent of each other, are yet linked in the strictest bonds of sympathy and harmony, and are perpetually influenced one by another. Thus, suppose a few grains of emetic tartar are introduced into the stomach, a part of the *organic* system. As soon as nausea takes place, the *animal* powers, or voluntary muscles are enfeebled, and the *intellectual* system, (or that through which the soul is manifested) even of the proudest hero, feels the shock, and lies prostrate with its suffering companions in the organic and animal life. Shakspeare, that accurate observer of Nature, repeatedly exemplifies this remark, and particularly in the celebrated dialogue between Brutus and Cassius, relative to Cæsar.

He had a fever when he was in Spain;
And when the fit was on him I did mark
How he did shake ————
His *coward* lips did from their colour fly;
Ay, and that tongue of his that bade the Romans
Mark him, and write his speeches in their books,
Alas! it cried—" Give me some drink Titinius,"
As a sick girl.

Let a sudden gust of passion or sense of fear, on the other hand, disturb the intellectual system;—the heart palpitates, the function of digestion is suspended—and the voluntary muscles tremble—all through sympathy with the great sensorium or seat of thought. In short, health and happiness (for although we may have health without happiness, it is impossible that we can have happiness without health) depend on a just equilibrium and harmony between the functions of these three systems; and whatever disturbs this harmony, by impairing the functions of any one of these systems, deranges directly or consecutively the whole fabric, intellectual as well as corporeal.

And here, to prevent misconception, I take occasion to state what I mean by *intellectual* system. I protest against the doctrine of materialism from a conviction of its erroneous foundation and pernici-

ous influence on society. Mind I consider as distinct from matter. It is an invisible agent, manifesting itself *solely* through the medium of the corporeal organs. When these last are deranged, the mental *manifestations* must also be deranged; but the mind itself remains unchanged, unassailable, imperishable. Even in insanity, it is not the mind which is diseased. Some portion of the brain is deranged, and then the mind can no more manifest itself sanely, than a musician can bring forth harmonious notes from an untuned instrument. The mind, as it is not material, neither is it subject to disease or death—if we once admit that it is subject to the one, we must inevitably come to the conclusion that it is liable to the other! With the essence or nature of mind we are, and ever will be ignorant. It is with the *corporeal* organs, through which it reveals its actions, that we have to do, and which I designate by the term *intellectual* system.

CHAPTER I.

INFLUENCE OF CIVIC LIFE, SEDENTARY HABITS, AND INTELLECTUAL REFINEMENT, ON THE ORGANIC SYSTEM AND ITS FUNCTIONS.

SECTION I.

ON THE DIGESTIVE ORGANS.

SUBSECTION I.

Through the Medium of Food.

The first law of Nature is, "Eat or be eaten." Life can only subsist by death. Every organized being, and particularly Man, slays thousands of other organized beings, either in the vegetable or animal kingdom, to build up or maintain his own corporeal fabric. The doctrine of transmigration, therefore, is not entirely visionary.

With ceaseless change the restless atoms pass,
From life to life a transmigrating mass;
Hence the same organs which to day compose
The poisonous henbane or the fragrant rose
May, with to-morrow's sun, new forms compile,
Frown in the Hero—in the Beauty smile!

A single glance over the various nations of the earth will convince us that Man is completely an *omnivorous* animal. The human stomach will draw nutriment from the ground we tread on, when imbued with animal and vegetable exuviæ; and from every thing else between this ottomaque fare and that of the most pampered London Epicure! This wonderful power of the digestive apparatus to assimilate every thing which air, earth, or ocean yields, to the support of Man, is a striking proof of the wisdom as well as the beneficence of our Creator. But it is most erroneous in principle, and pernicious in practice, to infer from this, that because we *can* eat all things, we therefore *may* eat all things with impunity. And here one of the evils of civilization becomes manifest. Not only is every thing that can allure the sense, or stimulate the appetite, brought to view in congregated society; but the "dishes tortured from their native taste" are indulged in by those who, of all others, are least capable of digesting them. The

ploughman, exposed at all seasons to the inclemencies of the skies, and strenuously exercising his voluntary muscles, might gormandize with safety on alderman's fare. But not so the citizen, however well trained in the school of Epicurus. His sedentary life, and a host of moral and physical circumstances around him, render it a matter of impossibility that *repletion* shall not succeed even an apparently temperate regimen; and in reality this repletion, and the irregular states of plethora which thence result, characterize nine-tenths of the diseases of civilized life, though they assume the garb of debility, and too often lead to the most erroneous and unsuccessful methods of treatment. Every one, after a full meal, especially of animal food, with all the etceteras of a civic table, must have felt how incapacitated he was for either mental or corporeal exertion. It is a law, indeed, in the economy of the living machine, that where any *one* of the three systems above mentioned is overexerted or over-excited, one or both of the other two systems must fall into a state of irregular or deficient action. The heavy meal of animal and other food exemplifies this law. When the digestive organs and circulating vessels are strongly engaged, the muscular and the intellectual systems

are indisposed towards the full exercise of their functions, the greater portion of vital energy being then apparently concentrated in the *organic* system, the principal theatre of operations for the time. On the other hand, let the animal system or voluntary muscles be thrown into violent or unusual action—the digestive process is diminished or even suspended, and the mind is incapable of dwelling intently on any train of thought. Who could solve a mathematical problem immediately after a furious cricket match? Again; Let a man sit down to an intricate calculation, or the investigation of an abstruse literary subject—nay, even to the perusal of an interesting poem or other effusion of genius, and the appetite will be so withdrawn, that the hour of dinner will be scarcely remembered.

This law of irregular or unequal excitement of the system, hitherto so much overlooked, unfolds the most important views both in health and disease; and he who studies it deeply, will find therein a powerful engine in the healing art, and a steady light on his researches, both physical and philosophical.

But to return. The evil consequences of *reple-*

tion, or luxurious living, far exceed belief, or even the calculation of the physician; for they metamorphose themselves so artfully, and mask themselves so successfully behind unsuspicious forms and phænomena, that they are constantly undermining the constitution, deceiving the patient, and misleading the practitioner.

Observation has proved, that when a stimulating substance is applied to any part of the body, internally or externally, a sensation or irritation is first produced, and then an increased afflux of blood to the vessels of the part. This law has long been acknowledged; *Ubi stimulus, ibi irritatio—ubi irritatio, ibi affluxus.* The sensation or irritation shows, that the *nervous* or sentient system of the part is first acted on; the turgescence evinces, that the vascular or *blood-vessel* system is next affected. Now, in the present state of society, and particularly of civic society, the whole internal surface of the digestive organs is daily stimulated, *in an inordinate degree,* not only by the poignant and complicated *qualities* of our food, but also by the *quantity.* If there be any one truth in medical science more firmly established than all others, it is this! Let us look around us, in this great and luxurious

metropolis, for instance, and we shall not find one in ten, whose digestive organs are in a natural and healthy condition. The tint of the eye and countenance, the feel of the skin, the state of the tongue, the stomach, the bile, and the various evacuations, offer to the experienced and discerning physician the most incontestible proofs of the position here advanced.

The tissue or membrane which lines the digestive organs from the mouth downwards, is a *secreting* surface, that is constantly pouring forth a fluid which is necessary for the digestion of the food in every stage of its progress. Now, when any gland, or secreting surface, is *over-excited*, the fluid secreted becomes unnatural in quantity and quality. It is sometimes diminished, sometimes increased; but always depraved. This is familiarly exemplified when the mucous membrane, lining the nose and air-tubes of the lungs, happens to be acted on by atmospherical transitions, as in a common cold. At first, the membrane is dry and half inflamed; afterwards a more copious secretion than usual comes pouring forth, and of so acrid a quality as to excoriate the nose and lips themselves. It is so with the mucous membrane lining the stomach and

bowels. When *inordinately* excited by the quality or quantity of the food and drink, the secretions are irregular and morbid, and therefore a constant source of *irritation* is generated in this important class of organs. This irritation is manifested by some pain or uneasy sensation in the line of the digestive organs; irregularity of their functions, particularly of the alvine evacuations; and an unnatural state of the tongue and urine.

But with these organs almost every part of the human system sympathizes, and the discerning physician can plainly detect their derangement in the state of the mind, the nerves, the muscles, and the skin. Let it be remembered, that when any one part of the system is inordinately excited, some other part or parts are deprived of their due share of vital energy, as we see every day exemplified in what is termed *derivation*. Now when so large a portion of this vital energy is kept constantly concentrated round the digestive apparatus, it is easy to see that the animal and intellectual systems must severely feel the loss. The shattered state of the nerves, the irritability of the temper, and the want of tone in the muscles, which hourly present themselves in luxurious and civic society, afford the

most convincing evidence of the truth of these positions.

This is one view of the affair; but there are various others. It often happens, that such is the strength of the constitution, and the efforts of Nature to counteract the morbid effects of *repletion*, that a degree of robustness or corpulency succeeds these luxurious habits, and thus the evil consequences are masked for a time. But the fact is, that the *superabundant* supply of nutrition, which is poured into the blood-vessel system, is deposited in the shape of fat; Nature being unable to throw it off by other outlets. This deposition is only *comparatively* salutary; and, in truth, the corpulent habit and ruddy complexion are too often but the index of a *morbid* excess of health, and the preludes to most violent and dangerous diseases.

Another mode in which Nature frees herself, for a time, from the effects of superabundant nutrition, is by throwing out eruptions and other unsightly blotches on the skin, by which means she often saves internal organs from a dangerous irritation. This is proved by the certainty and safety with which the whole of these cutaneous affections may be speedily

removed by improving the state of the digestive organs, lessening the quantity and simplifying the quality of the food, and by the judicious use of the warm bath. On the other hand, when Nature is interrupted in her work, and these cutaneous blemishes are incautiously repelled by external applications, the irritation is almost certain to fall on some internal organ, and there cause a painful sensation or an inflammatory action, according as the nervous or vascular structure of the part be predisposed to disease. Thus, in one constitution, on the repulsion of an eruption from the skin, the irritation is transferred to the lungs, and there excites pulmonary consumption. In another, it is transferred to the mucous membrane of the stomach, and heart-burn, or pain in the stomach, or indigestion, or even chronic inflammation of this organ may ensue. In a third, the liver becomes the seat of the translated irritation, and the various phænomena of bilious or hepatic derangements are developed. The intestines, the kidnies, nay the coverings of the brain itself, may, and often do, suffer in this way, with a host of corresponding miseries. All these, however, may be avoided by removing the cause or origin of the cu-

taneous eruption, as seated in the digestive organs, when the effect will soon cease.

But among the wonderful variety of means by which Nature counteracts the repletion resulting from too much and too rich food, stands GOUT. This, though a severe disease in itself, is yet an undoubted remedy or preventive of numerous other and more fatal ones. After a course of luxurious living, of longer or shorter duration, according to peculiarity of constitution, the human machine can no longer bear the rich tide of nutriment which daily flows through the interior organs, without danger of some of its channels giving way, and suddenly snapping the thread of life, as happens in apoplexy, the bursting of blood-vessels, &c. Nature, alarmed, now adopts a severe but a salutary measure. She generally gives notice of the approach of her operation, by first deranging the function of the *stomach*, for a few days, with occasional premonitory sensations in other parts of the body, as coldness of the feet, &c. Then the storm bursts. A paroxysm of pain and irritation is kindled up on some extreme part of the body, and the whole constitution is kept, during a time, in a feverish and restless condition, while a daily

and critical discharge by the skin and kidneys reduces the system to a certain point compatible with health, when a calm ensues—the functions of the stomach and other organs resume their accustomed tone, and the luxurious advocate of civic society returns to the pleasures of the table with renovated vigour.

Woe to the man who *rashly* interferes with, or *suddenly* checks this salutary process of Nature, whether by internal or external means! He who does so, has little knowledge of the animal economy, or little concern for the future welfare of the patient. True it is, that the operations of Nature, even when they are of a curative description, as they almost always are, must frequently be restrained, regulated, or spurred on, and in this consists the great art of the physician. But when the pain and irritation of Gout are not suffered to be *moderately* expended on some member at a distance from the vital centre; when a violent commotion is raised in the system by internal remedies; or when the inflammation is suddenly arrested by external cold, then, in all probability, will the irritation be transferred to some interior organ or tissue, and there manifest itself, at some future day,

in the shape of a chronic disease, which may bid defiance to the powers of medicine. This consideration should

> ——make us rather bear those ills we have,
> Than fly to others that we know not of.

These then are the prominent evils which, in civic society as now constituted, flow from redundancy and richness of food combined with sedentary habits; and a contemplation of them naturally leads us to the institution of a comparison or parallel of great moral and physical interest. But first let us say a few words on the remedies.

In my work on "the Influence of the Atmosphere," I have entered fully into the nature, cause, and treatment of the disordered state of the digestive organs. I may here only observe, that prevention, of course, depends on *temperance*, and the cure almost entirely on a well conducted course of *aperient* medicine, with or without the decoction of sarsaparilla. The *kind* of aperient must depend on the particular organ whose *function* is most disturbed, or whose structure may be in danger. This discrimination requires an accurate examination of all the phænomena, and of the state of the liver

and other abdominal organs. Then the cure will proceed with ease and certainty.

BALANCE OF ENJOYMENT IN FOOD.

Walking one evening in the vicinity of Grosvenor Square, I came opposite to an area, from whence issued the most profuse and savoury odours of every thing which could at once stimulate and gratify the human palate. An immense dinner was *in transitu* from the kitchen to the banqueting room; and leaning over the iron railings was a half starved and half naked wretch, apparently inhaling the rich steam from below, and soliciting charity from the passenger at the same time. A tall and benevolent looking gentleman stopped at this moment, and seemed to contemplate the scene. Putting a small piece of money in the beggar's hand, he lifted up his eyes to Heaven, and ejaculated in a low voice—"O how unequally are the gifts and *enjoyments* of Nature distributed in *this* world!" I could not undeceive this gentleman at the time; but should these pages ever meet his

eye, he will probably acknowledge that he took but a partial view of the affair.

Whatever support the doctrine of a future state of *rewards and punishments* may derive from the triumph of vice and the oppression of virtue *here*, the belief in a future state of *existence* neither requires nor derives support from the *apparent* inequality among mankind, in respect to happiness or enjoyment. Although I shall not attempt to prove that all ranks are *precisely* on a par on this point, yet I do maintain that they are very nearly so; and that Nature, indulgent but *just* to all her children, preserves, by an admirable code of laws, the most surprizing equilibrium in the balance of enjoyment of her gifts. A slight sketch of the extremes will enable every man of reflection and observation to fill up the outline.

The Epicure sits down at seven or eight o'clock in the evening to a sumptuous repast; but under every cover lies some source of derangement to the digestive organs, which more than counterbalances the voluptuous sensations of the palate. The half starved beggar, on the other hand, has little more than the disagreeable cravings of hunger to contend

with—cravings which produce but few, and ward off numerous diseases. True it is, that he may envy the rich man's lot, and be discontented with his own; but the rich man has little cause for exultation here; for independent of the train of afflictions that result from luxury, the *latter* itself "fades upon the appetite," and, after a short time, either ceases to afford pleasure, or destroys the capacity of enjoying it!

From these two extremes the shades blend imperceptibly, till they unite and form a picture of that *comparatively* happy medium of rational and philosophic temperance in food which, while it rejects not the bounties and delicacies of nature, keeps a steady check on the licentious appetite, and suffers not the digestive organs to be goaded to unnatural exertions by the compound qualities and redundant quantities of the necessaries of life. The memorable precept of the Roman poet, in fact, is equally applicable to physiological comfort, as to philosophical happiness.

Auream quisquis mediocritatem
Diliget tutus, caret obsoleti
Sordibus tecti, caret invidenda
Sobrius Aula.—

SUBSECTION II.

Influence of Civic Life, &c. on the digestive Organs, through the Medium of Drink.

Nature has plentifully supplied the earth with water, and animals drink nothing else to quench their thirst—ergo, says one party, water alone should constitute the human beverage. But says another sect, why did bounteous Nature weigh down the mantling vine with the swelling grape, if she did not design that man should drown his cares occasionally in the goblet? It is doubtful, however, if Nature destined the grape for fermentation. Did this indulgent Parent ever mean that barley and oats should be converted by the Scot and Hibernian into whiskey? It is certain, indeed, that civic association, or the *congregation* of a people any where, has a tendency towards Bacchanalian indulgences. This, I conceive, has been the case from the very infancy of the world. Homer's heroes seldom meet together without getting drunk,

especially when they are relating their own exploits. Let Ulysses himself confess it.

"Hear me, my friends! who this good banquet grace.
'Tis sweet to *play the fool* in time and place;
And wine can of their wits the wise beguile,
Make the sage frolic, and the serious smile;
The grave in merry measures frisk about,
And many a long-repented word come out!
Since to be *talkative* I now commence,
Let wit cast off the sullen yoke of sense."

ODYSSEY, b. xvi.

The foregoing passage explains most correctly the real source and universal cause of intemperance in drink. When men assemble together, they are anxious to please and be pleased. The colloquial impulse predominates. Wine gives wit to the dullest intellect; crowds the brain with ideas; tips the tongue with eloquence, and illumines the eye with the fire of expression. The dull scenes and corroding cares of life are now forgotten, or past dangers and difficulties are remembered and related with pleasure. The future is clothed in romantic anticipations of success and happiness—in short, a sort of Elysium opens round the soul! Is it to be wondered at, that man should wish to protract these ecstatic moments; or be too often carried insensibly along the stream,

till he approached the brink, or even precipitated himself into the gulph of excess?

But let us examine the affair a little deeper. The digestive organs, to which this inordinate stimulation was applied, and through the medium of which this intellectual excitement was raised, do not fall back, after such a scene, to the healthy standard, or to their usual integrity of function. No, indeed. The power of digestion languishes; the appetite is impaired; the biliary secretion is deranged. The animal and intellectual systems participate in the effects of this commotion. The muscles are enfeebled and tremble. The nerves lose their tone. The mind which, the evening before, was all prowess, is in the morning over-run with timidity, or clouded with horror. There is now a collapse of the system. The arteries of the brain were turgid and distended with blood during the excitement of the wine; they are now in an opposite state. Is it to be wondered at, that these alternate extremes should often lead to organic derangement of the delicate texture of the brain, and end in hypochondriasis or mania itself?

The liver and brain are the organs, in fact,

which suffer most from intemperance in drink; and it appears to me, that this occurs more from the subsequent collapse, than from the previous excitement. After a debauch, the power of the heart is greatly weakened. It cannot keep the *arterial* system proportionally distended, and hence the blood accumulates in the *venous* system; or, in other words, *congestion* in the veins of the liver and brain obtains, with great derangement of function, ending ultimately in lesion of structure in these organs.

In the LIVER it manifests itself by flying or uneasy sensations in the right side, or across the stomach; flatulence; acidity; clay-coloured evacuations; sallow complexion; mental despondency; fickleness or irritability of temper; pink, or other urinary sediment; disagreeable dreams; tenderness on deep pressure under the margin of the right ribs; occasional palpitation or fluttering about the heart, or pit of the stomach, &c. When this train of symptoms commences after irregularity of living, or indeed after any mode of life, the functions of the liver and digestive organs are deranged, and there is but one step farther to organic or incurable disease. This is the moment for a

prompt administration of remedies, particularly the blue pill, sarsaparilla, and antimonial aloetic medicines. In these cases, I have derived the most marked benefit from *artificial Harrowgate water*, which is easily prepared from sulphate of magnesia, super-tartrite of potash, and sulphuret of potash.

In the brain, it manifests its baneful effects by head-aches; flushings of the face; throbbings of the temporal arteries while lying in bed; tremors of the muscles, &c. These warn us that hypochondriasis, apoplexy, palsy, or mental alienation itself are to be apprehended, if not guarded against by timely evacuations from the bowels, occasional leeching or cupping in the temples or shoulders, cold applications to the head itself, &c.

In the *heart and blood-vessel system*, the pernicious consequences of intemperance may be traced by the discriminating physician, to irregularity of action in the central organ of the circulation; occasional palpitations or flutterings; strange and undescribable sensations in the chest; unequal distributions of the blood; flushings in one part of the body, and chilliness in another, but particular-

ly an extreme dejection of spirits, which characterizes deranged function and structure of the heart, and I am convinced leads, in numerous instances, to suicide!

To remedy these evils *effectually*, it is evident that a gradual diminution, or total substraction of the *cause* would be the surest method. But only a few have resolution to reform entirely. The best means of *counteracting or retarding* the deleterious effects of intemperance, are such agents as keep all the secretions open, particularly those of the bowels and the skin. The blue pill, aloes, and antimony, form a powerful combination for this purpose, when judiciously proportioned; and, aided by carriage or horse exercise, and the occasional use of the tepid or cold bath, (according to the actual condition of the heart, liver, digestive organs, and head) will ward off the punishment of our indiscretions for a much longer period than we deserve to enjoy!

The above observations apply to excesses in drink every where; but on the population of crowded cities, where sedentary habits and confined air prevail, these excesses exert an infinitely more

powerful influence than in towns, villages, or the open country. The citizen then, and particularly the civic *valetudinarian* ought to be especially on guard against this source of ill health.

A few words on the salutary effects of drink. There can be no question that water is the best, and the only drink which Nature has designed for man; and there is as little doubt but that every person might gradually, or even pretty quickly accustom himself to this aqueous beverage. But this will never be generally adopted. I believe a precept is inculcated in the lectures of a deservedly eminent physiologist of this metropolis, that no drink should be taken at meals, nor for three hours afterwards, lest the gastric juice should be diluted, and the digestion thereby weakened. From an attentive observation of man and animals in almost every parallel of latitude and climate of the globe, and among nations the nearest to a state of nature, I am disposed to draw a very different conclusion. Both men and animals, under these circumstances, drink *immediately after* eating; and this, I am convinced, is the salutary habit. But even this rule is not absolute. It must vary according to the season of the year, and the exercise, &c. of

the individual. In hot weather, when there is great exudation from the pores of the skin, and particularly where exercise is taken before dinner, the food must be diluted by drink *during* the meal, and *vice versa*.

Next to water, toast water, or soda water, is Sherry or Madeira and water—then very weak brandy and water—table beer. The next least insalutary species of drink, is undiluted Sherry, Madeira, and other white wines; then Claret, and least salubrious of all, Port wine and spirits. In proportion as we adhere to the upper links of this chain, so have we a chance of continued health. As we descend in the series, so do we lay down a substratum for disease.

It may here be remarked, that tea, independent of its adulterations, has a peculiar effect on the nervous system, and that the digestive organs suffer through the influence of this system. The morbid effects of ale or porter are more observable on the circulating and absorbent system, and will be noticed in the Section on that subject. Ardent spirits exert their deleterious influence chiefly on the stomach, liver, brain, and nerves.

PARALLEL OF ENJOYMENT AND SUFFERING IN DRINK.

The water-drinker glides tranquilly through life, without much exhilaration or depression, and escapes many diseases to which he would otherwise be subject. The wine-drinker experiences short, but vivid periods of rapture, and long intervals of gloom; he is also more subject to disease. The balance of enjoyment, then, turns decidedly in favour of the water-drinker, leaving out his temporal *prosperity* and future anticipations; and the nearer we keep to his regime, the happier we shall be. Here, however, as in all other things, there is a certain latitude within the range of health and happiness, which the wise man and the philosopher will occasionally traverse round, but not exceed. The *native fountain* is in the centre of this circle, and from it our eccentric divergences should be narrowly watched and carefully limited.

SUBSECTION III.

Influence of Civic Life, &c. on the digestive Organs, through the Medium of Air.

The exact effect of atmospheric air on our blood through the medium of the lungs, is not yet clearly ascertained; but we know that it is essential to life. We know also, that the air is the great agent in the production of disease, both by its vicissitudes of temperature, and by its noxious impregnations. If we examine the streets, the houses, the manufactories, the dormitories, &c. of great and crowded cities, we shall be astonished that the incalculable mass of exhalations of all kinds, which is constantly floating in the lower strata of a civic atmosphere, is not more detrimental to health than it is! Even the *respiration* of man and animals must, in some degree, deteriorate the air of large and populous cities. No man who has felt the exhilaration of the country air, and the depression of spirits which almost uniformly takes place on

returning to town, can doubt that a heavy tax is levied on the health of man in civic society!

Its most visible effects are depicted in the complexion, which is pale and *exanguious;* and this uniformly obtains wherever man is excluded from the pure breath of heaven. Its influence then on the digestive organs, through the medium of the skin (between which and the stomach, liver, and other internal organs, there is a most intimate sympathy) must be great, and really is so. The whole digestive apparatus is enfeebled in function, partly through the medium of the skin, and partly through the influence of that *nervous depression* which results from the inhalation of a civic atmosphere, and exerts a most powerful effect on the digestive organs.

It is a source of great satisfaction to the philanthropist to see that the construction of modern streets, and of modern houses, is well calculated to obviate the effects of contaminated air, and ensure a free ventilation. Every citizen, and particularly every valetudinarian, should endeavour, if possible, to emerge from the confines of the smoke once a day, were it for ever so short a time, and enjoy the air and exer-

cise of the open country. The cold, or tepid bath, will also be a powerful corrector of civic air. The parks, in the vicinity of this capital, save thousands of lives annually; and it is wonderful that they are not still more crowded, considering the countless hosts of sedentary invalids with which this overgrown metropolis abounds. It is not beneath the dignity, or even the prudence, of the medical philosopher to saunter along the Mall, or through the different parks, on Sundays, or other days of relaxation, to study the civic physiognomy, and contrast it with that of rural life. He will read in almost every countenance the aspiration of the Augustan poet:

O Rus, quando te aspiciam!

But it is through the medium of *atmospherical vicissitudes*, that the digestive organs, in polished life, suffer the worst effects. In civic society, the human race is so little exposed, or at least inured to the open inclemencies of the skies, that the surface of the body becomes highly susceptible of aerial transitions; and these impressions are quickly transmitted by sympathy, or otherwise, to the interior organs, particularly those concerned in di-

gestion and biliary secretion, as I have shown, at great length, in my work on "the Influence of the Atmosphere," to which I must refer for the details.

To counteract this enervated state of the surface, the cold, or even the *air* bath is the most powerful remedy.

It will not be questioned that the balance of *enjoyment*, in respect to air, points to the country; and that of *suffering* to the city.

SUBSECTION IV.

Influence of Civic Life, &c. on the digestive Organs, through the Medium of Sedentary Habits.

When men began to congregate in cities, they in a great measure, exchanged labour for art. Now, it is well known that the muscles, when briskly exerted, acquire tone and strength, and this tonicity is extended to the organs of digestion. But, on the other hand, by sedentary habits, the muscles are relaxed and debilitated, and the digestive apparatus participates in this debility. Besides, a certain degree of exercise is necessary to circulate the blood and other juices, and promote the various secretions; without which, the liver, stomach, and intestines cannot perform their proper functions. This degree of exercise is rarely, if ever, taken by the *sedentary* citizen, and its effects are seen in two different ways; in morbid accumulations of fat, and in paleness, emaciation, nervous debility, and hypochondriacal depression.

Another way, in which sedentary habits prove prejudicial to the digestive organs is, by the mechanical pressure which the stomach and liver sustain in numerous sedentary employments, where there is much stooping or leaning forward. A great deal of functional derangement is thus induced. Indeed, every class of artizans or mechanics has its peculiar train of prevailing diseases, which it behoves the medical practitioner to study with great care. The compositor who sets up the types of this page, and the pressman who works off the sheets, are affected with quite a distinct set of complaints. It is the same with all other species and subdivisions of labour.

The remedies are, *exercise*, passive or active, the cold bath, where no organ is unsound, and alterative doses of the blue pill, with, or without sarsaparilla. Tonics are more frequently hurtful than beneficial.

SUBSECTION V.

Influence of Civic Life, &c. on the digestive Organs, through the Medium of Mental Emotions.

The nervous system and digestive organs act and re-act upon each other with surprising force and rapidity. The intelligence of a severe loss, or the occurrence of an unexpected calamity will instantaneously annihilate the appetite, suspend the process of digestion, and allow the contents of the stomach and bowels to run into all kinds of decomposition and fermentation. A piece of agreeable information, on the contrary, will recal the inclination for food, and quickly set all the digestive machine again in regular motion. Now it is quite evident, that in proportion as men accumulate in large societies, those events and circumstances which tend, in a thousand different ways, to disquiet the mind, ruffle the temper, and excite the passions, multiply in an increasing ratio. Compare the whistling plough-boy with the calculating stock-

broker; the shepherd on the mountains, with the merchant in the city; the village magistrate, with the prime minister. Compare the state of their minds, and the state of their digestive organs, and you will find a corresponding contrast in both! Indeed, I firmly believe, that the mental perturbations of a *civic life* cause, upon the whole, more derangement of *function*, and ultimately of structure, in the stomach, liver, and alimentary canal, than all the other agents which we have been hitherto investigating. This is a subject deserving the utmost attention of all classes in civic society, as well as of the medical practitioner, whose prime object should be to ascertain the real source of a disease; for this discovery gives him infinite advantages in the mode of removing it.

Of all the *digestive* organs, the liver suffers most in this way. This I know from long and painful experience in my own person, as well as observation on others, both in this country and in tropical regions. Indeed, I have ascertained, that many of the depressing passions will instantaneously spasm the mouths of the biliary ducts, when a regurgitation of bile takes place into the system at large, tinging the eye yellow, and overcasting the

mind with the most gloomy anticipations, and indescribable despondency.

It is a curious but undoubted fact, that the different mental emotions, or passions, even of the same class, produce different effects on the organs of digestion, and especially on the biliary secretion. This is so strikingly the case, that by examining the morbid conditions of these organs, I have often guessed the real origin of them; and, on the other hand, by being told the malady of the mind, I have stated, without inquiry, the corporeal symptoms in the digestive viscera. The effects of anger, for instance, are very different from those of grief. The *former* will often increase, and render acrid the biliary and gastric secretions, producing irritation all along the line of the bowels. The *latter*, on the contrary, will diminish the same secretions, and often leave the alimentary canal completely torpid. Corresponding differences are seen to result from love, fear, jealousy, inordinate ambition, envy, &c. and the corporeal effects require an appropriate modification of treatment, a circumstance that is too much overlooked.

Study and deep thought, not only among the li-

terary, but among the professional, mechanical, and manufacturing classes of society, exert a most powerful and deleterious effect on the digestive organs, by drawing the vital energy and circulation to the brain and nervous system, and robbing the lower viscera of their due share of these important principles. This subject I have already touched on, in my work on "Tropical Climates," and also in that on "the Influence of the British Atmosphere." The subject will be again taken up in the third Chapter on the Intellectual System.

The remedies here are partly moral, and partly physical. The nature of the moral causes must be explained to the patient; though advice, in respect to the passions, or mental emotions, has seldom much effect. It is fortunate, however, that in no instance is the efficacy of well directed remedies more conspicuous than in derangements of the biliary and digestive organs, resulting from mental perturbations and anxieties. Indeed, it is astonishing how easily, not only these derangements themselves, but even the causes that produced them, may be relieved or removed, by a few simple remedies, when the real *seat* of the corporeal disorder is ascertained by accurate and careful examination of the symptoms and phenomena.

SUBSECTION VI.

Influence of Civic Life, &c. on the digestive Organs, through the Medium of late Hours.

Such is the harmonious balance, or sympathy, between the various organs and functions of the human frame, that no *one* can be disturbed, without annoyance to several others. Thus the *intellectual and animal systems* being greatly deranged by the unnatural custom of turning night into day, and day into night, which so universally prevails in civic life, the *digestive organs* come in for their share of the mischief, through the sympathy, or connexion in question; and that at a time too, when the said organs are labouring under the evil consequence of inordinate irritation from food and drink! The united effects are such as we might expect, and such as we actually meet with at every step. They are in exact ratio to the cause, and follow the commission of our crimes against Nature as closely as the shadow follows the substance!

SUBSECTION VII.

Influence of Civic Life, &c. on the digestive Organs, through the Medium of Medicine.

"Medicines differ from poisons only in their doses."

The multiplication of medicines and medical men, with the progress of civilized society, is a sufficient proof, if proof were wanting, of a corresponding multiplication of human infirmities! So complicated is the living machine, in structure and functions; so intricate its movements, and so numerous the agents by which it is influenced, from within and from without, that the science of health and disease as much exceeds all other sciences, in difficulty of attainment, as Algebra, or Astronomy, exceeds, in difficulty, the plainest rules of arithmetic. Now, when we look around us, and observe the host of old women, nurses, quacks, and even patients themselves, (leaving aside the

mass of ignorant, or unqualified, pretenders to regular practice) all busily employed "in pouring drugs, of which they know little, into bodies, of which they know less," we are irresistibly led to the melancholy conclusion, that, all things considered, it were better for mankind if not a particle of medicine existed on the face of the earth! Nor is this a stigma on the use, but on the *abuse* of the science. It is still a "divine art," to which the victim of pain must fly at last, however stoical or sceptical his disposition.

It has been a just cause of reproach, to this country in particular, that we are fonder of studying remedies than *indications:* that is, that we hunt too much after *specifics*, and do not sufficiently attend to the minute features, phenomena, and causes of disease, by a knowledge of which we might more effectually employ those remedies we already possess. Let us exemplify this observation. A lady is seized with that painful affection, *Tic douloureux*, or face-ache. One person recommends calomel and opium, as an effectual remedy: a second, proposes Fowler's solution: a third, asserts that belladonna is a specific: a fourth, that cutting the nerve is the surest remedy. Now any *one* of these

may happen to be the right remedy; but they may *all* be wrong, and the poor lady may run the gantlet before she is cured. Thus, if the face-ache be merely symptomatic of some derangement in the liver, or digestive organs, the calomel and opium will probably be successful: if the disease arise from a translation of gouty, or rheumatic irritation to the part, Fowler's solution may stop the paroxysms of pain: if it be, as it seems, a purely nervous affection, belladonna may remove it; and if it consist in an inflamed state of the neurilema, or covering of the nerve, the division of that covering by the knife may so empty the vessels as to check the disease: but if, as is often the case, the sentient extremity of a nervous twig, be irritated by a carious tooth, the whole of the foregoing means will be useless, and the extraction of the cause alone will destroy the effect.

What we have said of *tic douloureux*, applies to every other disease. Each has not only numerous *causes*, but numerous, and constantly varying *modes of action*, which require incessant vigilance, and the keenest penetration to trace and counteract. Thus, suppose a person to be suffering under acute rheumatism, or gout, in his foot or knee. We are

treating it with cooling evaporating lotions, and every thing appears to be going on well; but we have scarcely turned the corner of the street, when the rheumatic, or gouty inflammation darts, like an electric shock, to the heart or brain; here then we have to immediately undo all we have been doing. To the part where we were applying refrigeration, we must now apply mustard, blisters, or even scalding water; and, in short, totally reverse our proceedings. What then must be the consequence of employing *specific* remedies in diseases, that, like Proteus, are constantly changing their forms? Why misery, or death, to thousands every day!*

I have shown that, in civic life as now constituted, the digestive organs are very generally in a state of *irritation*, from the quantity and quality of our food, drink, &c. The situation of the *nervous system* will hereafter be proved to be very similar. To remove these evils, man will not avoid the causes that produced them; the only alternative then, is recourse to medicine. But almost all medicines are in themselves, *irritants;* and more than half the employment of the physician con-

* See my "Practical Researches on Gout," for examples.

sists in removing one irritation by inducing another. Let us exemplify this remark. A man, after full living, sedentary avocations, and irregular hours, begins to feel loss of appetite, head-ache, drowsiness, depression of spirits, fickleness of temper, with sense of fulness, and uneasiness on pressure in the right side, &c. There is now engorgement and *irritation* in the liver. What do we do? We give calomel, aloes, and colocynth, which *irritate* the mucous membrane of the digestive organs, stimulate the mouths of the biliary ducts, and cause a flow of bile and various other secretions into the intestines, which secretions are soon carried out of the system entirely. The whole train of symptoms now vanish like a fog before the sun beams. But suppose (which indeed is every day done) we had employed a different class of irritants, called tonics; as steel, bitters, &c. which the loss of appetite and other symptoms would *appear* to indicate? Why the result would be an aggravation, in the end, of all the complaints. Hence then we perceive, that nothing but the most careful and minute investigation of the *nature and seat* of the morbid irritation can enable us to apply the *artificial irritation* of medicine, with any prospect of ultimate success. This view of the subject might open the eyes of

mankind to the devastation which is daily produced in the digestive organs by the careless and indiscriminate administration of a farrago of medicines, which, like food and drink, both by their quantities and qualities, keep the whole line of the alimentary canal, and, in fact, the whole system, in a state of morbid irritability.

For this the patient has generally to thank himself. Instead of making a moderate remuneration for the advice or opinion of the medical attendant, he prefers paying him, like his wine merchant, *at per dozen*, for what he can swallow! In this way the most efficacious remedies are often rendered inert, by commixture or dilution, and perseverance is prevented by satiety or disgust.*

* I could adduce numerous instances where the power of medicines is affected by commixture; but the following will suffice. In certain urethral discharges, whether recent or chronic, the balsam capivi is possessed of singular efficacy, when simply administered in a little water, or on sugar. But I have seen it given in draughts and mixtures, for weeks together, without effect. When given in pretty large doses, and watched till it produces its specific symptoms, it rarely fails to stop the most inveterate gleet in three or four days. It is a curious fact that it removes irritation, or even chronic inflammation from the prostate gland, or neck of the bladder, at the very moment that it causes heat in making water. The manner and the dose, however, in which it is generally given, render it abortive.

But it may be said, that, as the specific action of medicines on the human frame, was found out by accident and observation, and as their effects are pretty uniform, so the knowledge of applying them cannot be so very difficult or complicated. Why no. A man of very common understanding may soon learn the names, the doses, and the qualities of the whole Materia Medica, and he may be able to tell pretty nearly how each will act upon the living machine, *in a state of health.* But the great difficulty is to discover the nature and seat of the *disease,* and how to remove that disease by remedies, which often produce diametrically opposite effects. It is not by *seeing* a great deal of sickness *only,* that this knowledge can be acquired; but by closely *studying* what we do see.

Now, as in civic society, the health is constantly wanting repairs; as the human frame is *there* in a state of morbid sensibility and irritability; and as patients, quacks, and illiterate practitioners are constantly pouring a flood of physic, upon real or imaginary diseases, it is no unreasonable inference, that, upon the whole, a greater quantum of suffering and mortality is *thus* induced, than is prevented by the scientific and judicious administration of medicine!

From the above considerations, it will be pretty evident, that the poor man is nearly on a par with the rich. If he cannot afford medicine, or medical advice, he runs no risk of injury from the delusive promises of the quack, or the misapplication of domestic prescription. The balance of happiness is nearly in *equilibrio* on this point.

SECTION II.

INFLUENCE OF CIVIC LIFE, SEDENTARY HABITS, AND INTELLECTUAL REFINEMENT, ON THE HEART AND CIRCULATING VESSELS.

Of all the internal organs, not immediately under the control of the will, there is none so easily and so commonly influenced and disturbed in its functions by mental emotions and corporeal sensations, as the heart. A whitlow on the finger will excite the action of the heart and arteries; fear, shame, joy, anger, &c. will drive this organ from its usual and healthy rhythm, into all kinds of irregularity and excess. This susceptibility to wild and tumultuous action, is in direct proportion to the degree of intellectual refinement, nervous sensibility, and delicacy of corporeal structure, which we possess. As it is a well known law, that disordered *function* will, in time, lead to diseased substance; and as in the progress of civilization and refinement, a host of circumstances are engendered and combined to disturb the tranquility of the *heart*, both in a moral and physical sense, we have thus

a clue to the overwhelming torrent of diseases of this organ, which, of late years, have pressed upon the observation of every intelligent practitioner. Corvisart, who has long studied the disorders of the heart, and who remarked their *increased* frequency, during the agitations of the French Revolution, declares it as his firm belief, that they are more common and frequent than those of either the liver or lungs. From the most unwearied attention to this subject, during the last four or five years, excited and kept up by personal feelings and sufferings, I am strongly disposed to believe that Corvisart is correct. A multiplicity of anomalous symptoms and feelings, usually clashed under the sweeping term "*nervous*," are, I know from experience, the result of functional or organic disorder of the heart; and very many of those sudden, awful, and mysterious deaths which we see and hear of, are consequences of the same. As it is only in the very earliest stages of these melancholy affections that medicine can effectually avail, and as prevention is still better than cure, I shall trace slightly, but I hope correctly, the principal causes which lead to the derangements of this vital organ, and thereby enable the reader to guard against such a formidable class of human afflictions.

SUBSECTION I.

Influence of Civic Life, &c. on the Heart, through the Medium of the digestive Organs.

The stomach, as it is the organ by which the corporeal fabric is nurtured and maintained, so is it the centre of sympathies. Between it and the heart so intimate a sympathy or consent obtains, that flatulence, indigestion and various other functional disturbances in the stomach will often go so far as to stop, for a moment, the action of the heart. At the very moment that I am writing these lines, my pulse intermits every fifth or sixth stroke, from a little biliary derangement and indigestion, resulting from the intense heat of the weather, some mental anxiety, and inordinate application to study. About twelve months ago, from the same causes, the action of the heart was so deranged, that I could not walk twenty yards without danger of fainting, and such a degree of palpitation and indescribable uneasiness in the chest, as threaten-

ed instant death. To these were added frightful dreams, startings from sleep; great mental despondency; irritability of temper; the most gloomy anticipations and prognostications of all future events; in short, a very considerable number of those symptoms and phenomena, which attend organic, or incurable disease of the heart. My alarm was considerable at first; but I soon discovered the functional or sympathetic nature of the complaint, and, by horse exercise, and improving the state of the digestive organs, I at length conquered, in a great measure, the disease. But the same causes still continue, occasionally, to reproduce it; and will do so, while I am subjected to their influence. I forsee that these *functional* disturbances will, in time, lead to *organic* changes in the heart; and though I know the causes I cannot avoid them!

——— video, meliora proboque,
Deteriora sequor !———*

Although I had studied both functional and organic diseases of the heart, with peculiar care, for fifteen years past, yet the phenomena which,

* In my work on the Influence of the Atmosphere *(Second Edition)* page 194, I have stated this case more in detail.

during the last twelve months, I observed and felt in my own person, have enabled me to ascertain certain minute, but distinctive features in the two classes of disease, on which I can rest with considerable confidence, my diagnostic decisions, in regard to their nature and treatment.

One most curious and interesting phenomenon is this; I can perceive when certain gases distend the stomach, the diaphragm, on which the heart rests, is either pushed up mechanically, or sympathetically affected, so as to disturb the action of the heart, and prevent it from unloading itself of its blood. At that moment, there is an unusual throb, or struggle of the heart, accompanied by a most distressing and sickening sensation, and a cessation of the pulse in all tangible arteries. For many months together this used to occur twenty, thirty, or one hundred times in the course of an hour. Another peculiar circumstance is this: a glass of spirits and water, or two or three glasses of wine, would, at any time, put an end to this phenomenon, for four or five, or six hours, to return again with increased violence. Walking, but particularly going up a flight of stairs, always aggravated the complaint; whereas I could trot or gallop on horse-

back, with a sure diminution of the irregularity of action in the heart. By repeated examination of numerous cases, where *organic* disease was suspected during life, and found on dissection, I ascertained that the above phenomena were diametrically opposite to those attendant on disordered structure of the heart. But an important mean of distinguishing sympathetic, from substantial disease of this organ, is percussion of the chest, and pressure of the stomach and abdomen, as first recommended by that experienced physician, M. Corvisart, of Paris. During the last six years, I have employed this measure in a great variety of instances; and the more I have seen, the more I am convinced, that, in conjunction with a minute examination of the symptoms of the disease, it affords a most invaluable criterion, whereby to estimate the nature and danger of disordered action, or deranged structure of the heart. But it is not by asking half a dozen questions, and then simply patting the chest, and squeezing the abdomen, that any accurate knowledge of an internal disease can be gained. The whole of the symptoms and phenomena, together with a rigid inquiry into the history and causes of the illness, should first be weighed, and then the chest and abdomen should be accurately

examined, while the patient is placed in various positions. Were this process always instituted (and no man can say that he has conscientiously investigated the nature and seat of a serious internal disease without it), we should not hear such conflicting opinions proceeding from eminent physicians relative to individual cases, nor patients complaining of the vacillating and contradictory modes of treatment, to which they have been subjected.*

But to return. The action of the heart being thus shewn to be greatly influenced by derangements of the stomach; and as a civic life perpetually tends to produce disorders of the latter organ, we need no longer wonder at the rapid increase of this new and destructive form of disease.

Independently of this sympathy between the heart and stomach, there are various ways in which the organ of the circulation becomes disturbed, through the medium of the digestive appa-

* In a course of lectures on functional and structural derangements of internal organs which the author is preparing to deliver, in this metropolis, the mode of conducting thoracic percussion and abdominal compression will be particularly delineated.

ratus. The stimulating and intoxicating drinks which we use accelerate the action of the heart in an unnatural manner. The richness and the quantity of our food, induce a too great fulness of the blood-vessels, and then the heart is called upon for exertions in circulating the blood, to which it is often unequal. These extraordinary exertions ultimately injure the texture, or mechanism of the heart itself, and hence a prolific source of terrible diseases.

Another, and very common way in which the heart suffers, is from derangements of the liver. Whenever the circulation of the blood in the liver is obstructed, the heart feels the bad effects; and that the liver, in this country, is frequently in a state of congestion, from a variety of causes, need not here be insisted on.* The very enlargement of the liver itself, by mechanically encroaching on the capacity of the chest, disturbs the free action of the heart, and ultimately injures its structure.

It requires not to be stated, that to prevent or

* See the Section on biliary derangements, in my work, on "Atmospheric Influence," *(Second Edition,)* from page 56 to page 96.

cure these affections of the heart, the original causes must be removed, as a *sine qua non*.

On this point the balance of suffering is clearly against the pampered citizen, and in favour of the frugal peasant.

SUBSECTION II.

Influence of Civic Life, &c. on the Heart, through the Medium of the Skin.

Our habits of life in civic society render us extremely susceptible to atmospherical transitions; and, as in this climate, these transitions are proverbially common, so we are all obnoxious to *rheumatism*. In my work on Atmospheric Influence, I have shewn, at great length, that *rheumatism of the heart* (from translation of the disease to that organ, from the muscles or joints) is remarkably frequent in this country. I have there stated numerous cases and disections of this dangerous disease, that happened in my own practice, and in that of others. I beg leave to refer, therefore, to the second edition of that work, from page 115 to page 130, for the fullest history of the complaint that has yet been published.

I may here state that *gout* is frequently translated to the heart, especially since the new modes

of curing that disease by the eau medicinale, colchicum, and cold applications, have come into vogue. I have lately seen a decided and melancholy instance of this kind.

Independently of these translations of specific irritation, as of gout and rheumatism, to the heart, this organ suffers much from sudden changes of temperature in the air, whereby the volume of blood is often abruptly driven from the surface to the interior, embarrassing the action of the heart. These effects are, of course, increased, if not principally occasioned, by our fashionable attire, which leaves not only the skin, but the great vital organs of the body at the mercy of inclement, and ever varying skies!

To obviate the serious ills which result in this way, more attention should be paid to clothing, and to those circumstances which I have pointed out, under this head, in my other work. In treating rheumatism we should equally avoid the extremes of a warm and a cold regimen, both of which tend to give the disease a disposition to shift its seat from external to internal parts, and thus endanger the heart. On this subject I have treated fully in my

other work before alluded to. The same observations apply to the treatment of gout, especially, in valetudinary constitutions, and where the disease has existed some time. Those *heroic* medicines, as our French brethren call them, which drive gout out of the system, as it were by surprize, only enable it to re-enter, with greater force, and instead of lodging on the outworks, to take possession at once of the citadel!

The balance of suffering here preponderates, on the whole, against the luxurious citizen and sedentary artizan. For although the soldier, the sailor, and the rustic labourer, are more exposed to the vicissitudes of the skies, and are, perhaps, more generally affected with rheumatic complaints; yet, they are exempt from that delicate organization, morbid irritability, and keen susceptibility, which tend to produce translations of this painful malady from the exterior to the interior of the body.

SUBSECTION III.

Influence of Civic Life, &c. on the Heart, through the Medium of the Passions.

The influence of mental emotions on the functions of the heart is still greater than on the digestive organs. No one who has felt the palpitation, anxiety about the chest, and galloping pulse, which accompany perturbation of mind, can doubt the truth of this position. The detection of Antiochus's passion for Stratonica by the pulse, is a proof of how early the influence of the mind on the heart and arteries was remarked. And, in fact, the innumerable instances on record of sudden and slow death, from mental causes, can only be accounted for in this way. Every body knows that Philip the Fifth, of Spain, died suddenly on learning the disastrous defeat of his army near Plaisance. Zimmerman states that, on opening his body, the *heart* was found burst. And thus it is that the vulgar and metaphorical expression of a "*broken heart*," is sometimes pathologically correct.

But it is not the heart alone that feels the impulse of mental perturbation. The minutest capillaries are under its influence. *Shame*, for example, will instantaneously *gorge* the capillaries of the cheek, and render the skin like crimson. Let the emotion be changed to *fear*, the lily usurps the seat of the rose, and the face is blanched and bloodless! Anger can rouse the organs of the circulation into such preternatural action as to overcome for a time, habitual decrepitude. Thus Muley Moloc, though lying on the bed of death, worn out by an incurable disease, and not expected to live an hour, started from his litter, during the important crisis of a battle between his troops and the Portuguese—rallied his army—led them to victory—and immediately expired!

The heart then being so particularly under the influence of the mind, we may form some idea of the wide range of effects resulting from the various, and almost unlimited play of the passions among so thinking, so reading, and so *political* a people as the English. With the progress of civilization, refinement, and intellectual cultivation, a host of what may be termed *predispositions* to disease have arisen, that lay us at the mercy of almost

every breath of heaven. Our feelings are rendered so acute, that we are all soul within, and all nerve without. We thus, like the spider, "live along the line," and every event that happens on any point of the globe's surface is regularly transmitted, like an electric shock, to this sympathetic island! The consequence is that a *morbid sensibility* is generated throughout the whole population, but particularly among those in the upper walks of life, where exposure to the vicissitudes of the atmosphere, temperance, and daily labour, blunt not the senses, and fortify not the corporeal fabric. Thus constituted, it may easily be conceived what havoc those great and predominant passions, love, ambition, jealousy, emulation, &c. produce on the enervated frame, when carried beyond their natural and healthy boundaries.

The effects of the mind on the body, in a salutary point of view, cannot be accounted for, in any other way, than through the medium of the heart and blood vessels.

In fine, after a long and attentive study and observation of this subject, I am led to conclude, that of all causes, which conspire to disturb the function, and ultimately to injure the structure of

this important organ, *mental agitation* holds the first rank.

It need hardly be remarked that mental sensibility is in proportion to civilization and refinement; and hence that if the upper classes of society taste more exquisite pleasure, they also suffer more exquisite pain than those in lower gradations of rank. Enjoyment and suffering then are probably *in equilibrio* here.

P. S. Before closing this section, I may be permitted to state, that on examining my notes, relative to diseases of the heart, I find more cases have presented themselves from the class of tailors, than any other description of tradesmen. May not this be owing to the bent position in which they sit, obstructing the free circulation of blood from the heart, and ultimately disturbing its function or injuring its structure?

It would appear that, in sedentary occupations, where much stooping or leaning over a desk is used, the *heart* suffers more than the *lungs*, though the attention of patients and physicians has been principally directed to the *latter*, without suspecting the injury which the *former* was sustaining.

SECTION III.

INFLUENCE OF CIVIC LIFE, ETC. ON THE LUNGS AND GLANDULAR SYSTEM.

THERE is every reason to believe that scrofula first originated, and still continues to be produced by the confined air, sedentary habits, irregularity of clothing, and derangement of the digestive organs, so prevalent in civic life. The surface of the body is rendered peculiarly susceptible of atmospheric impressions; and as aerial transitions are remarkably frequent and abrupt, in this climate, so the glands and absorbent vessels are constantly disturbed in their *functions*, and their *structure* ultimately suffers. Thus are produced the external or visible forms of scrofula, which are but too familiar to every eye. Yet these are trifling, when compared with the *internal* ravages of the disease. The *external* forms having been induced by the causes enumerated above, an *hereditary* disposition

to the complaint is afterwards transmitted from parent to progeny. It now manifests itself in the lungs. Children, under these circumstances, will be born with the organ of respiration studded with scrofulous tubercles, smaller than the finest grains of sand; and *these* may lie dormant and harmless during the longest life, if they are not excited into action by the various causes alluded to, and particularly by the impressions of the atmosphere on the surface of the body. When we become enervated by a civic life, these impressions act with redoubled force, and then pulmonary consumption is developed with all its slow but fatal ravages on the human constitution!

To obviate these melancholy consequences, the children of citizens should be early accustomed to bear the vicissitudes of our climate, by taking every opportunity of bringing them into the open air of the country, or the vicinity of town. They should be clothed *uniformly*, but not too warmly; for by this ill judged advice more injury than good is done. The cold, or shower bath, should be early commenced, and long persevered in, as it is the grand agent in fortifying the constitution against the changes of the climate; while the digestive or-

gans should be particularly attended to, so that no irritation may be propagated from thence to the lungs or glandular system.

It is but justice to observe that the soldier, the sailor, and the peasant, have not greatly the advantage of the citizen, in respect to immunity from pulmonary consumption; for the great and frequent exposures of the three former classes to the rude inclemencies of the skies, make serious depredations on the lungs, and probably occasion as wide a range of mortality among them, as the luxurious and refined habits produce in civic society. Here then the balance of enjoyment and suffering hangs pretty nearly *in equilibrio;* but it might be made to preponderate in favour of the citizen, were he to adopt the suggestions contained in various parts of this essay.

CHAPTER II.

INFLUENCE OF CIVIC LIFE, SEDENTARY HABITS, AND INTELLECTUAL REFINEMENT, ON THE ANIMAL OR MUSCULAR SYSTEM.

We now come to that division of the human frame which consists of the muscles that are entirely under the subjection of the will. It is a certain and well ascertained fact, that the more a voluntary muscle is exercised, within the bounds of moderation, the stronger and larger it will become. This is exemplified in the arms of blacksmiths, or goldbeaters, and in the legs of chairmen, or porters; which members are more developed in growth and strength than the other parts of the body. The converse of this position is equally true; inaction will render a muscle pale, flabby, weak, and cause it to shrink. The author of this essay lately amputated a boy's thigh, who had been confined two

or three years to one position, by a dreadful state of disease in the knee and leg. Not a single muscular fibre was to be seen, and the surface of the stump presented one uniform appearance, like the brawn of pork! The poor little fellow perfectly recovered.*

From these facts we may form some idea of the debility and relaxation, which must be induced throughout the muscular systems of people congregated in large cities, cooped up in confined apartments, and employed in sedentary occupations, without adequate air or exercise. The physical effects resulting from these causes are so glaring and conspicuous in every street through which we pass; in every house, or manufactory, which we enter; in almost every individual whom we contemplate, that the medical philosopher is struck with the enormity of the evil! How would the pale, the puny, and the sedentary artizan of this metropolis look, if robed in the armour of Bruce, with the bow of Ulysses in his hand? How would he groan beneath the pressure of the one, and tug, in vain, to bend the other!

* See the 5th vol. Medico-Chirurgical Journal and Review, where this curious case is related.

Was it the sires of such as *these*,
Who dared the elements and pathless seas,
Who made proud Asian monarchs feel,
How weak their *gold* was against Europe's steel,
Or beings of another mould?
Rough, hardy, vigorous, manly, bold?

This debility of muscle is a very prominent trait in the physical character of civic life, and operates with great, and decisively injurious influence, not only on various functions of the body, but, through the medium of the nervous system, on the *mind* itself! Corporeal inertion is at once a cause and a consequence of this muscular weakness; and as a due action of the voluntary muscles lends infinite assistance to the heart and arteries, in circulating the blood; to the absorbent vessels, in taking up the various fluids; and to the different glandular organs in secreting what is necessary or unnecessary to the system, so a deficiency of exercise cramps and confines all those functions, and mainly contributes to that paleness or sallowness of the countenance, languor of mind and body, timidity, nervousness, accumulations of fat in the abdomen, or dropsical swellings in the limbs, palpitations of the heart, head-aches, in short, to that *tout ensemble*, which distinguishes the sedentary citizen from the laborious peasant.

What is the remedy? "there is no remedy," says the inhabitant of the city. "I have neither time nor place for exercise and fresh air; my business confines me, and there is no alternative." Yet I have observed through life, that if a man have but the *will*, he may soon have the *power* to do almost any thing. There is hardly a merchant, tradesman, or mechanic, within the sound of Bow bells, who may not take sufficient air and exercise for the preservation of health, provided he has a proper degree of determination so to do. Few there are who cannot spare an hour, either early in the morning, late at night, or at some period of the day, to emerge from the midst of noise and smoke into the nearest point of open space, there to stretch his muscles by active exercise, and fill his lungs with wholesome air. Where this cannot be done, exercise may be taken within doors, by going up and down stairs, using the dumb bells, &c. Where the valetudinarian is unable to take pedestrian exercise, and cannot afford a horse or carriage, the *swing* offers a tolerable substitute. In short, any man who will have a little *energy of mind*, may contrive to exercise the body, to a considerable extent, even were he within the walls of a prison. To the affluent I would recommend more horse and

carriage exercise than they now take. It would counteract a host of those maladies, which their other deviations from a state of nature induce. In my work on Atmospheric Influence, I have dedicated a whole section to the subject of *passive exercise*, in which the invalid will find important information, and to whose serious perusal I beg leave to recommend it. The cold bath supplies, in a very considerable degree, the want of regular exercise. Where there is no organ deranged in structure, this substitute may be resorted to at almost any period of life.

The balance of enjoyment and suffering, in the muscular system, is, upon the whole, I think, in favour of labour, and against indolence. *Fatigue* is at all times preferable to *ennui*. To the *former*, sleep, "tir'd nature's kind restorer," offers her oblivious opiate of repose. To the *latter*, night brings only a scene of feverish restlessness, or frightful dreams!

Labor ipse voluptas.

CHAPTER III.

INFLUENCE OF CIVIC LIFE, SEDENTARY HABITS, AND INTELLECTUAL REFINEMENT, ON THE BRAIN, AND NERVOUS SYSTEM.

It is by the brain, or organ of thought, that man is distinguished and raised above all other animals. The nerves of sense, by which impressions are conveyed to this organ, are not so acute in the lord of the creation, as in many of the inferior orders of animated beings. He is surpassed by the eagle in sight, by the dog in smelling, by the hare in hearing, and by almost all animals in *taste;* strange and incredible as *this* may seem to some of our epicurean connoisseurs! Yet there is a spark, I trust an inextinguishable spark, in the sensorium of man, which radiates the light of *reason* in every direction, and proclaims its superiority over *instinct,* by tokens which none but the marble-hearted materialist can fail to recognize. True it is, and melan-

choly is this truth, that man, as a free and responsible agent, often breaks through the admonitory barriers of reason, and plunges in the ocean of folly, or vice, or crime, till "the divinity that stirs within him," can no longer manifest itself! But for this he suffers; even in this world he is punished for every imprudence; and, probably, expiates here every iota of his guilt.

But to return. When the human species began to congregate in cities, it was soon perceived that in *this* class of society, the exertion of the *intellect* must predominate over that of the *body*. As civilization advanced, intellectual labour became more necessary, and the labourers multiplied in proportion. At the present period, the employment of a very large class of human beings, especially in civic life, consists almost exclusively in *mental* exertion. Look at the rulers of countries; the legislators, with their innumerable hosts of agents and sub-agents; the members of the pulpit; the bar; the medical world; the literary world; the superior orders of the mercantile world. In all these mental labour is the *regular duty*, and corporeal exertion only the *occasional relaxation*. Nay, in the vast body of mechanics and artists them-

selves, *thought* predominates over *action*. Even the semi-feminine man-milliner, who measures out our ribbon or lace, depends more on his talents, that is, on the volubility of his tongue, than on the agility of his muscles, for success in business. To such an extent is intellectual labour now arrived, that a very large and important class of society, live entirely by "teaching the young ideas how to shoot;" and a still larger class, who have no actual occupation, rack their minds with inventions, schemes, and projects that fade away as fast as they are engendered.

Now I have before shewn that the more a voluntary *muscle* is exercised, within a reasonable limit, the stronger and more capable of exertion it becomes: it is so with the brain and nervous system; the more their faculties are brought into play, within a certain bound of moderation, the more extensive becomes the sphere of their power. The sense of touch, the sense of smell, and the sense of hearing, all become more acute, in proportion as they are exercised. But this extra developement and sensibility of the brain and nervous system, cannot take place but at the expense of some function, or structure, in the animal or organic system: for na-

ture, though sufficiently liberal, is, upon the whole, very economical of her gifts, and extremely impartial in the distribution of her favours. When, therefore, an undue share of the vital energy of any individual is directed to a particular organ or system, a proportionate subduction is made from some other organ or system, and this is a most undoubted, and a most important truth, which is little understood, and less attended to by the world in general. Examples meet the eye at every step; one or two may suffice. A man devotes his whole soul to study, or mental exertion, in any way, whether literary, political, military, commercial, or mechanical. Examine that man minutely; you will find him thin and sallow, with weak digestive organs, and quickness or irritability of nerve. This is the man for deeds of "bold emprize!" He is such a man as tyrants like not near their thrones. What said Cæsar to a man of this description?

> "Would he were *fatter!*——
> For, if my name were liable to fear,
> I do not know the man I should avoid,
> So soon as that *spare* Cassius. He reads much,
> He is a *great observer*, and he looks
> Quite through the deeds of men."

Bonaparte was thin and sallow, till the "workings of his mind," so deranged the functions of the

liver and digestive organs, that he became *bloated*. He will soon die dropsical. Wellington is thin and sallow; but his frame of mind is happy; his career of glory unclouded. He mingles active exercise with intellectual labour; and he will live long his country's pride.

Let us look, on the other hand, to those who cultivate, with assiduity, the noble art of eating. In these the stomach and neighbouring organs become the great foci of the vital energy of the system. Here the *organic life* predominates over the animal and intellectual lives. The digestive organs, in fact, among such people, form the "seat of the soul," instead of the Pineal gland of Descartes, and consequently the brain, the nerves, and the muscles, are deprived of their *due proportion* of vitality. This did not escape the Poet of Nature, though he knew not in what way it was produced.

> "Fat paunches have lean pates, and dainty bits
> Make rich the sides, but banker out the wits."

The above preliminary view of the subject shews us, at once, the necessity and the importance of preserving a harmonious balance between the three

great systems which compose the human fabric—the intellectual, the organic, and the animal systems. Health and happiness depend on a just equilibrium between the functions of these three systems; and whenever *one* is too much exercised, or too much pampered, it must inevitably be at the expense of *another*, and disease and disquiet are the certain results!

When we reflect on the complicated and minute machinery of which the human fabric is composed; when we consider its various ties and "nice dependencies," we shall be constrained to acknowledge, that no trifling discrimination is necessary in adjusting its erratic movements! What mischief then must every day be done by the rude hand of the ignorant pretender to so difficult a science! Could the tomb open its "marble jaws," and disclose the secrets which are there locked in impenetrable night, it would doubtless—

> ——————————— a tale unfold
> Whose lightest word would harrow up the soul!
> But this eternal blazon must not be ———

SECTION I.

INFLUENCE OF CIVIC LIFE, ETC. ON THE BRAIN AND NERVOUS SYSTEM, THROUGH THE MEDIUM OF THE DIGESTIVE ORGANS.

THE intimate sympathy which subsists between the stomach and the head, has been observed in all ages; and, in fact, is well known to every individual, by that common complaint—a sick headache. Whether this sympathy takes place through the medium of the blood-vessels, or nerves, or both (which is more probable), we cannot tell; but it is sufficient that we are assured of the fact. A similar sympathy obtains between the brain and liver, as is exemplified by blows on the head producing abscess in the biliary organ; and obstructions of the liver causing the most tormenting headaches. Now, when we reflect on the numerous causes, already traced, of derangement in the stomach, liver, and other digestive organs, arising out

of civic life, and all its consequences, can we wonder at their effects on the brain and nervous system, as evinced in the long catalogue of nervous and hypochondriacal complaints, and even of insanity itself, now so prevalent in civic life?

We thus see how the digestive organs repay, in kind, the morbid influence and effects which they sustain from the brain and nervous system, through the medium of the passions, and intellectual refinement. In fact, these two systems, like two friends in harmonious co-operation, mutually support each other, *in health;* but, in disease, like sworn enemies, they act and re-act upon one another, with the most destructive malignity.

When the brain and nervous system suffer from faults in the digestive organs, we generally find among the more obtrusive symptoms—head-aches; either watchfulness at night, or too great a disposition to sleep, especially after dinner (a symptom that peculiarly denotes a regurgitation of bile into the blood, and a deficiency of this fluid in the bowels); fickleness or irritability of temper; unsteadiness in any pursuit or application; occasional dimness or other affection of the eyes; disturbed sleep; de-

spondency; gloomy anticipations; distrust of, or want of confidence in, our best friends; restlessness of disposition; and great nervous susceptibility on the occurrence of any untoward accident, or unexpected event:—these and very many other phenomena indicate a disordered state of the circulation, and excitability in the brain and nerves, arising from derangement of function in the digestive organs.

To superficial observers these appear to be *moral* affections, whereas they are, in reality, *physical* evils, which are only to be remedied or removed by *physical* means. By improving the state of the digestive organs, we remove a load from the brain and nerves; and a total revolution in the frame of mind is thus produced, in a few weeks, by agents whose operations are supposed to be exclusively confined to the corporeal fabric.

And it must ever be borne in mind, that, when the above-mentioned disordered state of the brain and nervous system has been originally induced by moral causes, as grief, disappointment, &c. the derangement which *thence* ensues to the digestive organs, keeps up, or perpetuates, the evil, long after

the moral causes are themselves removed: for unfortunately, in diseases, *effects* do not always disappear with their *causes*. There is another important consideration connected with the present subject:—we all know how little control we possess over moral or mental impressions. The loss of a husband or wife, of a parent or child, cannot be erased from the memory by the most powerful eloquence, or soothing friendship. But the effects of these depressing passions on the *digestive organs*, and the *reaction* on the intellectual system which ensues, may be greatly counteracted by physical means, and the melancholy mental emotions thereby surprisingly lessened in intensity, and shortened in duration. This is a fact which is little understood, and almost totally overlooked by Philosopher, Physician, and Patient; yet it is one of high import, and of direct application to the purposes of life.

SUBSECTION I.

Influence of Civic Life, &c. on the Brain and Nervous System, through the Medium of the Liver *in particular.*

During the last fifteen years, I have traced, with great care, the influence of a deranged state of the liver and biliary secretion on the brain and nervous system, both in my own person and those of others; and the result is, a conviction that the extent of this influence is infinitely greater than the world is aware of. The idea of the ancients, respecting the origin of melancholy and insanity in black bile was not entirely chimerical; and, in modern times, Pinel and a few others have brought forward facts that strongly countenance the supposition. That a disordered state of the biliary organ produces an irregular distribution of the blood and nervous energy in the brain, I am as well convinced as of my own existence; for so certainly does the *mental* index point to the *corporeal* derangement, that I am

warned of the latter by my waking trains of thought; nay, even by the tenour of my dreams. When the biliary derangement arises to any height, the spring of my mental energy is lost, and every where difficulties, like "hills over hills and Alps on Alps," arise to embarrass my pursuits and defeat my objects! I am quite satisfied that many important events in a man's life, which are usually attributed to *moral* causes, have hinged on *material* ones; and that not a day passes in which we do not see—

> ————enterprizes of vast pith and moment,
> In this respect their currents turn awry,
> And lose the name of action.——

In civilized society thousands moulder away their lives in mental torpor and apathy, who, by a proper attention to the functions of the liver and digestive organs, would soon evince an energy of mind and activity of body that might render them useful, if not distinguished members of the community.

But this is not all. Conjugal and domestic happiness is every day blighted and turned into misery by *irritability of temper*, resulting, unequivocally, from derangement of the biliary and digestive or-

gans, while the cause is supposed to be of a *moral* nature, and consequently the proper remedies totally neglected. There is indeed another unsuspected source of this evil, of which I may take some notice on a future occasion. Meantime I may state, that, whenever a change in the temper or mind of a man or woman takes place, without a plain and manifest moral cause, the condition of the liver and digestive organs should be minutely examined and accurately ascertained; for *there* the origin of the mischief will, three times out of four, be discovered: nay, where the *mental* disturbance has evidently arisen out of circumstances quite foreign to *corporeal* ailments, it will be found that the *latter* have quickly supervened, and are perpetuating, if not aggravating the evil.

The remedies are aperient medicines; particularly the aloetic, mercurial, and antimonial kind, with decoction of sarsaparilla, Harrowgate water, and the nitro-muriatic acid bath, varied and apportioned according to the peculiarity of the constitution, and the nature and degree of the biliary derangement.

SUBSECTION II.

Influence of Civic Life, Sedentary Habits, &c. on the Brain and Nervous System, through the Medium of the Heart.

I HAVE already shewn the powerful influence which mental emotions exert on the action of the heart. When the functions, and particularly when the structure of this organ become deranged, they exercise a reciprocal influence on the organ of the mind; that is, on the brain and nervous system. The character of this influence assimilates very much with that resulting from derangement of the liver and digestive organs, particularly in respect to *mental despondency*. Among the numerous cases of disease of the heart which have fallen under my observation, I never knew one unaccompanied by *mental despondency*. Indeed, there is a cast of countenance attending this melancholy class of human afflictions, which speaks more than words to the discriminating and experienced eye; and

leads the intelligent physician, at once to the true seat of the disorder. The depression of spirits resulting from affections of the heart, is often of the deepest hue; and I have known two instances where it led to *suicide*. I am strongly disposed to believe that this unnatural crime, is frequently the consequence of the disease under consideration.

It is of the utmost importance to distinguish derangements of the heart from derangements of the liver, or digestive organs, since the treatment is very different. A minute investigation of all the phenomena, aided by thoracic percussion and abdominal compression, will generally unveil the true nature of the complaint.

SECTION II.

INFLUENCE OF CIVIC LIFE, ETC. ON THE BRAIN AND NERVOUS SYSTEM, THROUGH THE MEDIUM OF THE PASSIONS.

Civic life, by rendering the *senses* more acute, makes the *passions* more ungovernable than in rural retirement. In congregated masses of society, every kind of food for the passions is not only superabundant in quantity, but of the most stimulating quality. Hence, among a very considerable class in the upper walks of life, we find an unnatural and insalutary degree of excitement, kept up in the brain and nervous system from this prolific source. The extent of injury, which our health sustains in this way is beyond all calculation! Plato believed, that "omnia *corporis* mala ab *anima* procedere;" "all diseases of the body proceeded from the mind, or soul," and certainly a great proportion of them do! Here we cannot fail to perceive the great analogy which obtains between the

state of the digestive organs and that of the nervous system, in civic and luxurious life. The one is over-excited by too much and too stimulating *food;* the other, by excess in the *passions.* The derangements resulting from *each* set of causes act and react, directly or indirectly, on *both* systems; and thus it is that we never see a morbid condition of the *nervous system* unconnected with a similar condition of the *digestive organs,* and vice versa.

The *over-action* of the principal passions on the brain and nerves, closely resembles the over-action of food and drink on the stomach and other digestive organs, in many minute particulars, and especially by attracting an *undue proportion of blood* to the over-excited parts. The whole of the phenomena attending the Proteian host of *nervous diseases,* and all the most successful methods of treatment, attest that their immediate seat, or source, is, an unequal distribution of the blood, and of the sensibility. The brain and nerves, becoming more irritable, from over-excitement by the passions, their vessels swell with blood, and this *local turgidity* causes a constant pressure on, and keeps up a perpetual irritation in, the whole nervous system. This is a doctrine which, though

deduced from actual observation and experience, is far wide of the popular belief, and but little diffused in the medical world itself. It is such importance, however, and opens out so much better a practice than is generally pursued, that I shall go somewhat into detail, in order to elucidate it.

Let us single out a few of the more prominent forms of diseases, affecting the brain and nervous system, in order to investigate their nature and treatment. Excepting mania, (to which indeed it often leads,) there is no affliction, in this class, more terrible to the sight, or more disastrous to the human intellect in its consequences, than epilipsy. Now the original seat of this disease may be, and usually is, in some organ, or part, at a distance from the head; for nine patients out of ten, feel a premonitory sensation (called the Aura Epileptica) creeping, or darting from the remote part to the brain, where, when it arrives, it produces the convulsive attack. The seat of this irritation is generally in the liver, digestive organs, or genital system; but sometimes in other parts. While this irritation remains in its common domicile, the brain and nervous system have an immunity from disturbance; but unfortunately it has a character of *mobility*,

like the irritation of gout, (with which it is often complicated,) and when from any cause the brain and nervous system become predisposed ; that is, weakened, or impaired, in their functions, the epileptic irritation is transferred, from time to time, to the head and spine, when an instantaneous rush of blood to these parts succeeds, and epileptic struggle follows. Even when an organic disease of the brain, or spinal marrow, determines epilepsy, it is only when *an excess of irritation and blood* accumulates in these organs, that the convulsions take place. The organic disease must be *constantly* present; yet the epileptic paroxysm only occurs *occasionally ;* a convincing proof that the disease depends on a temporary *super-excitement* of the nervous, and *turgidity* of the blood-vessel system.

When the original seat of the epileptic irritation is at a distance from the head, as in the liver, or digestive organs, yet repetitions of this determination to the brain and spine, must sooner or later induce organic disease there. Dissection has always proved this ; and I may refer to a remarkable case, which fell under my own observation, and is published in the October (1818) Number of the Medi-

co-Chirurgical Journal, for a memorable illustration.

This view of the subject leads to most important indications in the treatment and prevention of this afflicting malady. What would naturally present itself as the first? Why to search out the seat of the distant irritation, which radiates on the brain at intervals, and endeavour to remove it. If this cannot be done, the next object is to *fix* the irritation there, or in some other unimportant part. The third indication is to strengthen the nervous and intellectual system, by avoiding an undue exercise of the passions, or strong mental emotions. The fourth, or *preventive* indication, is, to lower the fulness of the blood vessels, by spare diet and various evacuations. These are the means by which I have often succeeded, and by which we may often succeed, in lengthening the intervals of epileptic attacks, if not of entirely checking their progress.*

The same reasoning will apply to *hysteria*. There is here some local irritation, or some local torpor

* See the section on epilepsy, in my work on "the Influence of the Atmosphere," where I have pointed out a new remedy for this disease, from the use of which I have seen the greatest benefit derived.

(for opposite extremes often produce the same effect) in an organ remote from the head, generally in the *uterine* system; and when, at any time, the irritation shifts its seat to the *brain*, a congestion of blood in the vessels of this organ is the immediate consequence, and the hysterical paroxysm ensues. The whole farrago of *antispasmodic* medicines, exhibited in this complaint, produce no other effect, than occasionally to *irritate* the stomach, bowels, or uterine system, and thus recall the blood and irritability from the head. These effects might be induced by much more simple and much more permanently beneficial means.

Mania is another modification of corporeal derangement (for it is strictly and essentially a bodily disease) originally induced by repeated irritations and congestions of blood in the head, resulting from undue exercise of the passions; stimulating food and drink, and all those various causes which lead to derangement in the digestive organs, to gout, &c. The changes that precede this worst of human afflictions are always slow, and often imperceptible to any but the experienced eye of the medical observer. How frequently does this cruel enemy advance, at first, under the guise of a little quick-

ness or irascibility of temper; shewing the increasing *morbid sensibility* of the brain and nerves. Next we see higher gusts of passion, upon trifling occasions than the individual was accustomed to evince; always attended with a rush of blood to the head, which is visible in the face and eyes. Every rush of this kind leaves the irritability of the brain more acute than before, and consequently predisposes to a repetition of the occurrence.

In this state the patient may go on for years, unsuspicious of the growing evil. At length these repeated disturbances of *function* in the intellectual organ, begin to produce slight derangements of *structure* in a part of such delicate texture. Then the *judgment*, which was hitherto unimpared, loses its balance, as is evinced by whims, antipathies, capricious attachments, peculiarity of opinions, religious enthusiasm, and a thousand other slight abberations from previous strength of mind. The corporeal derangement advances another step; and now a window of the soul is shut! a dark spot is but too plainly perceptible in the *manifestation* of the mind; an erroneous idea is formed on some particular subject, and to this the patient clings with invincible obstinacy, although perhaps, on all

other points, the judgment is correct. From this stage, the corporeal disease and the mental hallucination advance, with equal steps, till the "soul's dark cottage" admits not a single ray of light from without, nor emits a gleam of intelligence from within!

> Alack, 'tis he! why he was met even now
> As mad as the vex'd sea; singing aloud;
> Crown'd with rank fumiter, and furrow weeds,
> With harlocs, hemlock, nettles, cuckoo-flowers,
> Darnel, and all the idle weeds that grow! LEAR.

In the various stages, from the lowest grade of nervous irritability up to raging wild insanity, thousands are every day to be seen. By far the greater number, however, pass through a "feverish existence," without entering the pale of what is termed "mental alienation;" while many are cut off by other and more violent forms of the disease, as apoplexy, palsy, &c.

What is apoplexy or paralysis but a rush of blood to the head, either *bursting* its channels there, or *swelling* them to such an extent as to compress the brain, and abolish sense or voluntary motion? What are the causes that lead to this event? The

same which produce the whole catalogue of nervous affections. Too much food and drink, with too little exercise; too much scope to the passions, with too little restraint from reason or religion; too many sedentary habits of body, with too many anxieties of mind!

PREVENTION OR CURE.

Having pointed out the *causes* of this formidable host of enemies to civic life, the *prevention* must, of necessity, depend on the patient himself. There is a considerable proportion of my readers, who will benefit by the elucidations here given, and by the rules which I have laid down. But a great majority will pursue their course till they are overtaken by the consequences. Then the physician is called in; for strange as it may appear, man will rather take *physic* which costs much, than *advice* which costs nothing. It is fortunate, however, that medicine has greater power over the class of *nervous diseases* than is commonly supposed. They have been too long attributed to a "*distempered*

imagination," and treated as "airy nothings," without a "local habitation or a name." But I have shewn, that they are real *corporeal* ailments, and of the most painful kind too, inasmuch as they more heavily press down the springs and energies of the mind than any other class of human afflictions.

Let it be remembered, that when the circulation of the blood and the sensibility of the system experience any *irregularity of distribution,* the whole frame seems to languish under *debility:* for the parts to which *too much* blood or irritability is directed are not strengthened; while those parts which are deprived of *their due share* must be weakened. Here lies the *ignis fatuus,* which so often leads astray both physician and patient. All the tonics, stimulants, or cordials in the world, will not restore the energy of the system, till the equilibrium of the circulation and excitement is effected; and this must be done either by relieving the oppressed parts of their overplus, by *evacuations,* local or general, as may be necessary; or by determining the blood and irritation to another or other parts of the system. In these two operations lies the grand secret of treating nervous diseases with success; and

any man who studies carefully the laws of the animal economy, and observes with accuracy the natural efforts of the constitution, may apply a very few simple but energetic means, with the greatest ease and advantage.

The brain and nerves must be relieved by occasional leeches to the temples, or cupping glasses to the shoulders. The diet must be *lessened* and regulated; the bowels must be kept free; the biliary secretion improved; and the circulation and excitability kept even and balanced, by the warm or cold bath, according to circumstances—by horse, carriage, or pedestrian exercise—by regular hours—and by governance of the passions.

This will be considered a bold innovation by those whose minds are clouded with the inert phantasies of Hoffmanic *spasm*, or the delusive dogmas of Brunonian *debility*. But it is not a doctrine of the cabinet; it is the offspring of extensive observation, and clinical experience.

BALANCE OF ENJOYMENT AND SUFFERING IN RESPECT TO THE INTELLECTUAL SYSTEM.

It is extremely difficult to draw a parallel of enjoyment and suffering, in the intellectual system between the upper and lower ranks of life. If, to undergo much pain for the sake of a little pleasure, be a proof that the balance is in favour of the *latter*, then the *beau monde* has it. But if, on the other hand, the Hindoo precept, that "rest is preferable to action, sleep to waking, and death to all," have any foundation in reason, then a question may arise, whether the lower classes of society, who have little susceptibility towards intellectual pleasures or pains, may not, upon the whole, claim the *balance* of enjoyment, in their journey through the present state of existence. But, at all events, Nature has here, as in most other instances, charitably ordained a surprising equilibrium. She has strewed the paths of rank, riches, and luxury, with a corresponding proportion of painful diseas-

es, particularly of the nervous or intellectual system; while the uncultivated boor glides along, unconscious of the pleasures and unacquainted with the sufferings which necessarily grow out of civic society and intellectual refinement.*

JAMES JOHNSON.

* See the Section on "*Diseases of Literary Characters*," in my work on "the Influence of the Atmosphere on Health," *second edition*, p. 217.

THE END.

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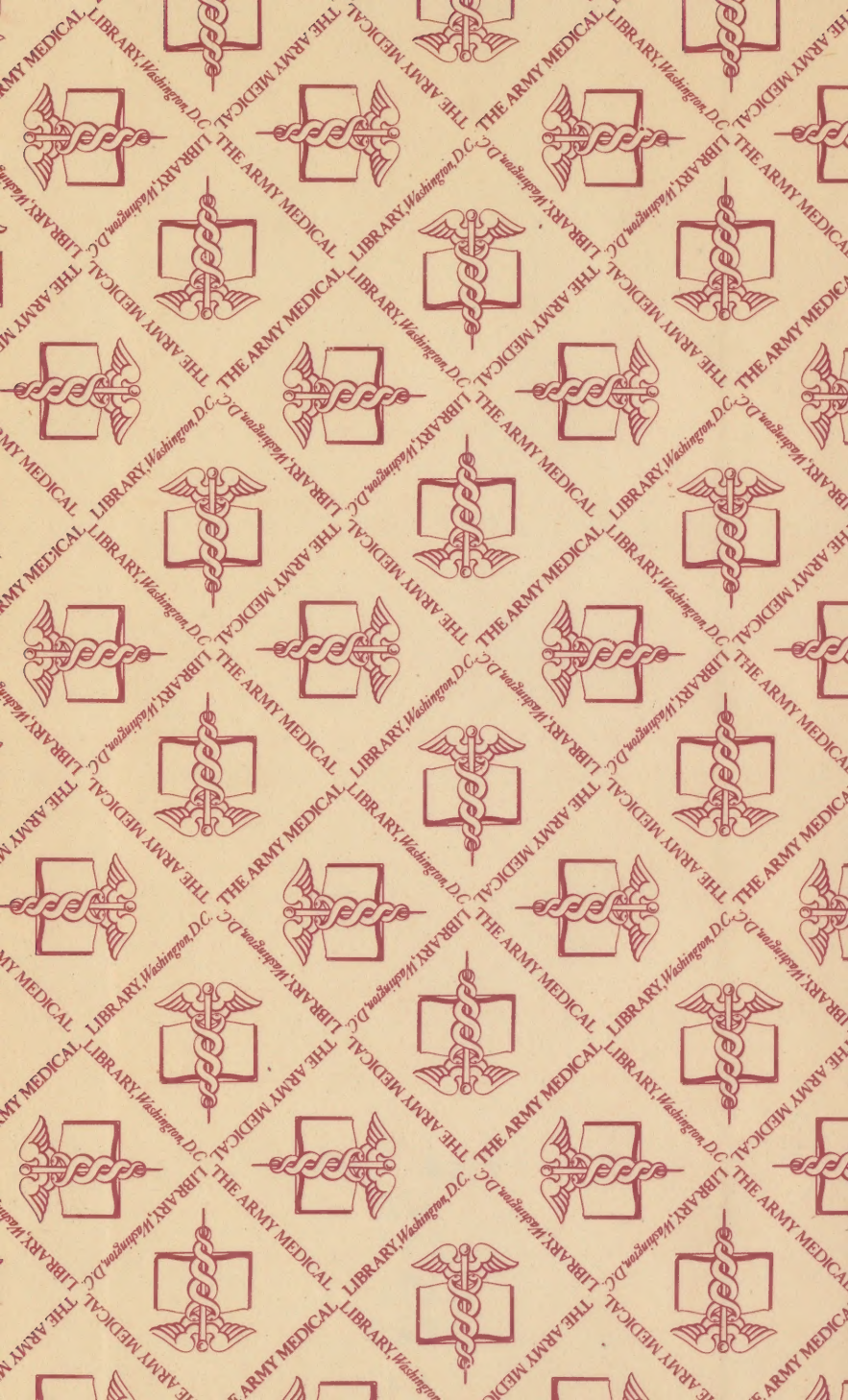
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